

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 005		3. EFFECTIVE DATE 09/22/2014		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY CPOD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		(x)		9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
		X		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-11-038 0013	
				10B. DATED (SEE ITEM 13) 02/12/2013	
CODE (b)(4)		FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)
X	Mutual Agreement between the Parties and Battelle's letter dated September 19, 2014

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Tax ID Number: (b)(4)

DUNS Number:

The purpose of this modification is to extend the Task Order Period of Performance until December 31, 2014 to allow more time for EPA (Region 8) to learn how to use the tool being developed under this task order. This is a No Cost extension.

TOPO: Douglas Grosse

LIST OF CHANGES:

Reason for Modification : Additional Work (new agreement, FAR part 6 applies)

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	11 Camille W. Davis	16C. DATE SIGNED 09/22/2014

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-11-038/0013/005

PAGE 2 OF 2

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Period Of Performance End Date changed From: October 31, 2014 To: December 31, 2014</p> <p>This is a No Cost extension. Delivery: 30 Days After Award Delivery Location Code: CPOD NORWOOD US ENVIRONMENTAL PROTECTION AGENCY CINCINNATI PROCUREMENT OP DIVISION 4411 MONTGOMERY ROAD SUITE 300 CINCINNATI OH 45212 USA</p> <p>Payment: RTP FINANCE CENTER US ENVIRONMENTAL PROTECTION AGENCY RTP-FINANCE CENTER D143-02 109 TW ALEXANDER DRIVE DURHAM NC 27711</p> <p>FOB: Destination Period of Performance: 02/13/2013 to 12/31/2014</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 004		3. EFFECTIVE DATE 04/25/2014		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)
6. ISSUED BY CPOD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268		7. ADMINISTERED BY (If other than Item 6) CPOD				
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693				9A. AMENDMENT OF SOLICITATION NO. 9B. DATED (SEE ITEM 11) 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-11-038 0013 10B. DATED (SEE ITEM 13) 02/12/2013		
CODE	(b)(4)	FACILITY CODE				

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.
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12. ACCOUNTING AND APPROPRIATION DATA (If required)
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	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)
X	Mutual Agreement between the Parties and Battelle's letter dated April 25, 2014

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Tax ID Number: (b)(4)

DUNS Number:

The purpose of this modification is to extend the Task Order period of performance until October 31, 2014 to allow Battelle additional time to develop the Tribal tool. This is a No Cost extension.

TOPO: Douglas Grosse

LIST OF CHANGES:

Reason for Modification : No Cost Extension
Continued ...

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15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	11 Camille W. Davis ELECTRONIC SIGNATURE	16C. DATE SIGNED 04/25/2014

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-11-038/0013/004	PAGE 2 OF 2
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NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Period Of Performance End Date changed From: July 14, 2014 To: October 31, 2014</p> <p>Total Amount for this Modification: \$0.00 Delivery: 30 Days After Award Delivery Location Code: CPOD NORWOOD US ENVIRONMENTAL PROTECTION AGENCY CINCINNATI PROCUREMENT OP DIVISION 4411 MONTGOMERY ROAD SUITE 300 CINCINNATI OH 45212 USA</p> <p>Payment: RTP FINANCE CENTER US ENVIRONMENTAL PROTECTION AGENCY RTP-FINANCE CENTER D143-02 109 TW ALEXANDER DRIVE DURHAM NC 27711</p> <p>FOB: Destination Period of Performance: 02/13/2013 to 10/31/2014</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 003		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY CPD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268		7. ADMINISTERED BY (If other than Item 6) CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		(x) 9A. AMENDMENT OF SOLICITATION NO.		9B. DATED (SEE ITEM 11)	
CODE (b)(4)		FACILITY CODE		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-11-038 0013 10B. DATED (SEE ITEM 13) 02/12/2013	

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	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not. ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Tax ID Number: (b)(4)

DUNS Number:

The purpose of this modification is to change the Alternate Task Order Manager

From: Verle Hansen

To: Scott Jacobs

TOPO: Douglas Grosse

LIST OF CHANGES:

Reason for Modification : Other Administrative Action

Total Amount for this Modification: \$0.00

Continued ...

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15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA <i>Camille W. Davis</i> (Signature of Contracting Officer)	16C. DATE SIGNED 11/22/2013

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-11-038/0013/003PAGE OF
2 2NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Alternate COR/Project Officer changed to: Scott Jacobs Period of Performance: 02/13/2013 to 07/14/2014				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 5	
2. AMENDMENT/MODIFICATION NO. 002		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY CPD		7. ADMINISTERED BY (If other than Item 6) CODE	
CPD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268					
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		(x)		9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-11-038 0013	
				10B. DATED (SEE ITEM 13) 02/12/2013	
CODE (b)(4)		FACILITY CODE			

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	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Changes-Cost Reimbursement, FAR 52.243-2 and Battelle's proposal dated July 9, 2013

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ 0 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Tax ID Number (b)(4)

DUNS Number: _____

The purposes of this modification are to: incorporate PWS revisions; change the Task Order ceiling from \$158,475.00 to \$119,400.00; and revise the Task Order funding break-outs. The Period of Performance end date remains July 14, 2014.

TOPO: Douglas Grosse

LIST OF CHANGES:

Total Amount for this Modification: -\$38,975.00

New Total Amount for this Version: \$119,500.00

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	16C. DATE SIGNED

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-11-038/0013/002PAGE OF
2 5NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>CHANGES FOR LINE ITEM NUMBER: 1 Total Task Order Amount changed From: \$158,475.00 To: \$119,500.00</p> <p>CHANGES FOR ACCOUNTING CODE: 12-13-C-26CL000-301FK8XPW-2532--26A6A-1326CLE003-001 Account code changed from 12-13-C-26CL000-301FK8XPW-2532-26A6A-1326CLE003-001 to 12-13-C-26CL000-301FK8XPW-2532--26A6A-1326CLE003-001</p> <p>The revised Task Order Break-out is as follows:</p> <p>Cost: \$(b)(4) Fee: Total: \$119,500.00</p> <p>Delivery: 30 Days After Award Delivery Location Code: CPOD NORWOOD US ENVIRONMENTAL PROTECTION AGENCY CINCINNATI PROCUREMENT OP DIVISION 4411 MONTGOMERY ROAD SUITE 300 CINCINNATI OH 45212 USA</p> <p>Payment: RTP FINANCE CENTER US ENVIRONMENTAL PROTECTION AGENCY RTP-FINANCE CENTER D143-02 109 TW ALEXANDER DRIVE DURHAM NC 27711</p> <p>FOB: Destination Period of Performance: 02/13/2013 to 07/14/2014</p>				

PERFORMANCE WORK STATEMENT
STREAMS II
Task Order 0013, Battelle EP-C-11-038
Modification 2

TITLE: Development of a Sustainability Tool for Tribal Housing Decision-Making

Task Order Manager (TOM) Name: Douglas Grosse Office: ORD/NRMRL/LRPCD 26 W. Martin Luther King Drive, MS489 Cincinnati, OH 45268 Phone: (513) 569-7844 Fax: (513) 569-7676 Email: Grosse.Douglas@epa.gov	Alternate Task Order Manager (ATOM) Name: Verle Hansen Office: ORD/NRMRL/LRPCD 26 W. Martin Luther King Drive, MS489 Cincinnati, OH 45268 Phone: (513)-569-7326 Fax: (513) 569-7676 Email: Hansen.Verle@epa.gov
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PERIOD OF PERFORMANCE: *There is no change to Period of Performance with Modification 2.*

BACKGROUND:

There is no change to the Background with Modification 2.

TASK ORDER OBJECTIVE:

There is no change to the Task Order Objective with Modification 2.

GENERAL SUBTASK APPROACH:

The Region 8 team of experts will lead efforts in the areas of communication, collaboration, and convening of Tribal group(s) related to the project. The Region 8 Team will be responsible for ensuring the Contractor is able to engage with the Tribes in planning the tool, securing secondary data, securing approvals necessary to collect primary data from the Tribes, and Tribal testing of the tool. The Region 8 Team will also coordinate meetings with the Tribes and include the Contractor via teleconference during key meetings, except during those times the Contractor will participate in face-to-face meetings when (and if) the Tribes believe it is absolutely necessary for the Contractor to attend. Two (2) face-to-face meetings are anticipated. Additionally, collection of data by the Contractor will require travel to the site and engagement with homeowners. The Contractor will ensure that the Region 8 Team will be involved in and/or aware of communications between it and the regional Tribes.

This task order consists of five (5) subtasks. Prior to preparing the work, the contractor shall determine whether they would have any potential conflict of interest (COI) in conduct of the specific Subtasks. The contractor shall notify the TOM if they have a conflict of interest and the nature of such COI. Should a COI exist, the contractor shall take no further action on that task assignment unless authorized by the Contracting Officer (CO). A report detailing the issues of the COI shall be sent to the CO, with electronic copies to the Project Officer (PO) and TOM.

Meaningful tribal involvement and participation should be incorporated into each task and will be coordinated by the Region 8 Team (not the Contractor). EPA Region 8 will coordinate project engagement and communication with Tribal Councils, Tribal Environmental Departments, Tribal Housing entities, Tribal Historic Preservation Officers, community members, and construction contractors. The Region 8 Team will incorporate the establishment of a regional Tribal Steering Council ("COUNCIL") into their communication and outreach to the Tribes.

The TOM will provide the contractor with a standard format to be used when reporting under subtasks (2-5) deliverables.

TASKS:

Task 1: Quality Assurance Project Plan

There is no change to Task 1 with Modification 2.

Task 2: Review and Collection of Existing Data

This project will first rely upon the collection of existing data, information, and knowledge to complete sustainability assessments on both traditional/existing and alternative/newly developed (approximately 3 – 4 types) tribal housing appropriate for EPA Region 8. The Region 8 Team will work with regionally established Tribal Steering Council to select a demonstration Pilot Tribe. Standardized decision analysis approaches (Parnell, 2007) may be used. The Region 8 Team will be responsible for securing data from the Tribes relevant to the four priority housing types that will be selected in consultation with the COUNCIL. The Region 8 Team will connect the Contractor with the Region 8 HUD representative for the Contractor to obtain existing tribal housing data. Standardized decision analysis approaches may be used. Sources and relevant criteria identified thus far include:

Environmental:

- Indoor air quality assessment:
- CO, CO₂, radon, moisture/humidity, total volatile organic compounds, formaldehyde, presence and visual extent of mold
- Energy performance:
- Predictive energy modeling to estimate monthly energy bills or the actual energy bills
- Infrared camera examination, blower door testing, duct tightness, data logging of temperatures, HERS rating
- ENERGY STAR Portfolio Manager for greenhouse gas emission projections
- Materials management:
 - Locally manufactured or harvested/mined content
 - Recycled content
 - Rapidly renewable content
 - Reused/repurposed materials.
- Water usage:
 - Water bills/meters or other means of tracking usage, leak prevention, WaterSense fixtures.

Economic: Cost of materials; cost of construction; out-sourced costs; long-term anticipated maintenance and repair costs; utility bills (electricity, gas, water, etc...); infrastructure requirements; overall allocation and distribution of financial resources; development of a simplified list of available federal housing funds and what these funds can be used for

Societal: Knowledge of traditional and non-traditional building practices and maintenance; cultural and community benefits and impacts; other impacts on tribal culture and community development as identified in *Benefits of Tribal Building Codes*

This review may take up to four (4) months and the results of this literature search and review shall be presented to EPA through a brief summary electronically and the contractor shall participate in a

conference call to obtain feedback within four (4) weeks after submittal.

Task 3: Conduct Housing Assessments and Collect New Information

Upon completion of Task 2, the contractor will conduct housing assessments and collect additional information to fill in the data, information, and knowledge that were not readily available in Task 2 above. The TOM, the Region 8 Team, and the COUNCIL will prioritize the data gaps. EPA will communicate the prioritized gaps to the Contractor. The Contractor will then develop a technical and cost proposal (including any equipment to be rented or purchased, e.g. indoor air monitors or radon test canisters) including a timeline for gathering the data needed to fill the high priority gaps within budgetary constraints. After proposal evaluation, a modification will be issued. The TOM will then provide technical direction to the Contractor on when to proceed with data gathering. The Contractor will also be required to prepare a QAPP for the data collection plan. Such housing assessment and new data acquisition may take up to seven (7) additional months and shall be summarized in a written report and presented to EPA. EPA will provide comments within four (4) weeks that the contractor will incorporate.

Task 4: Data and Information Management

There is no change to Task 4 with Modification 2.

Task 5: Develop Sustainability Tool

Using the data, information, and knowledge collected in the previous subtasks along with interviews with tribal members in Region 8, develop a sustainability tool to help tribal decision-makers arrive at and understand the most appropriate sustainable housing decisions to advance the economic, societal, and environmental interests of their tribe both in the short and long-term. Development should include usability assessments with tribal members to modify methodology/user interface to meet users' needs. The tool must be easy to use, readily available, and be adaptable to reflect each tribe's unique assets, challenges, and priorities. Additionally, identification of pertinent place-based data and information, i.e. tribal housing values and preferences, building material specifications, environmental health data etc., could be used in conjunction with community assessment tools such as Tribal Focused Exposure Risk Screening Tool (T-FERST) to frame the decision and enhance collaborative development of a multi-criteria decision tool supporting more sustainable tribal housing. The Draft deliverable may take up to six (6) months to develop and submit to EPA for review and comment. An additional 30 days may be required to finalize the final deliverable, the Housing Sustainability Tool.

APPENDICES: *There is no change to the Appendices with Modification 2.*

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 4	
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5. PROJECT NO. (If applicable)		6. ISSUED BY CPOD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268		7. ADMINISTERED BY (If other than Item 6) CODE	
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CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Changes-Cost Reimbursement, FAR 52.243-2 and Battelle's letter dated March 11, 2013

E. IMPORTANT: Contractor ☒ is not. ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Tax ID Number: (b)(4)

DUNS Number:

The purpose of this modification is to change the due date for the QAPP in the PWS Task 1.

This is a No Cost change.

TOPO: Douglas Grosse

LIST OF CHANGES:

Total Amount for this Modification: \$0.00

This is a No Cost extension of the QAPP due date in PWS Task 1.

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)	16C. DATE SIGNED 03/12/2013

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
EP-C-11-038/0013/001

PAGE 2 OF 4

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP FINANCE CENTER US ENVIRONMENTAL PROTECTION AGENCY RTP-FINANCE CENTER MAIL DROP D143-02 109 TW ALEXANDER DRIVE DURHAM NC 27711 Period of Performance: 02/13/2013 to 07/14/2014				

PERFORMANCE WORK STATEMENT
STREAMS II
Task Order 0013, Battelle EP-C-11-038
Modification 1

TITLE: Development of a Sustainability Tool for Tribal Housing Decision-Making

Task Order Manager (TOM)	Alternate Task Order Manager (ATOM)
Name: Douglas Grosse Office: ORD/NRMRL/LRPCD 26 W. Martin Luther King Drive, MS489 Cincinnati, OH 45268 Phone: (513) 569-7844 Fax: (513) 569-7676 Email: Grosse.Douglas@epa.gov	Name: Verle Hansen Office: ORD/NRMRL/LRPCD 26 W. Martin Luther King Drive, MS489 Cincinnati, OH 45268 Phone: (513) 569-7326 Fax: (513) 569-7676 Email: Hansen.Verle@epa.gov

PERIOD OF PERFORMANCE: *There is no change to the Period of Performance under Modification 1*

BACKGROUND

There is no change to the Background under Modification 1.

TASK ORDER OBJECTIVE:

There is no change to the Task Order Objective under Modification 1.

GENERAL TASK APPROACH:

There is no change to the General Task Approach under Modification 1.

TASKS:

Task 1: Quality Assurance Project Plan

A Category III quality assurance project plan (QAPP) as defined by NRMRL QA requirements, shall be developed for all data acquisition activities that involve sample collection and analysis unless a different QA category is specified. Any task that requires measuring or sampling (environmental measurements) will need a QAPP unless an exception is denoted in a task. The QAPP will be submitted to the TOM within 30 days after the TOM authorizes Battelle to proceed with preparation of the QAPP. EPA will review and approve the QAPP within two (2) weeks.

Task 2: Review and Collection of Existing Data

There is no change to Task 2 under Modification 1.

Task 3: Conduct Housing Assessments and Collect New Information

There is no change to Task 3 under Modification 1.

Task 4: Data and Information Management

There is no change to Task 4 under Modification 1.

Task 5: Develop Sustainability Tool

There is no change to Task 5 under Modification 1.

APPENDICES

There are no changes to the Appendices under Modification 1.

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 10 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 02/12/2013		2. CONTRACT NO. (If any) EP-C-11-038		6. SHIP TO: a. NAME OF CONSIGNEE US ENVIRONMENTAL PROTECTION AGENCY	
3. ORDER NO. 0013		4. REQUISITION/REFERENCE NO. PR-ORD-13-00112			
5. ISSUING OFFICE (Address correspondence to) CPOD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268				b. STREET ADDRESS CINCINNATI PROCUREMENT OP DIVISION 4411 MONTGOMERY ROAD SUITE 300	
				c. CITY CINCINNATI	e. ZIP CODE 45212
7. TO: a. NAME OF CONTRACTOR BATTELLE MEMORIAL INSTITUTE				f. SHIP VIA	
b. COMPANY NAME				8. TYPE OF ORDER <input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 505 KING AVE				REFERENCE YOUR: Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
d. CITY COLUMBUS		e. STATE OH	f. ZIP CODE 432012693		

9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE CPOD	
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					12. F.O.B. POINT Destination
13. PLACE OF a. INSPECTION Destination		b. ACCEPTANCE Destination		14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 30 Days After Award
16. DISCOUNT TERMS					

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Tax ID Number: (b)(4) DUNS Number: Development of a Sustainability Tool for Tribal Housing Decision-Making TOPO: Douglas Grosse Continued ...					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
21. MAIL INVOICE TO:						
a. NAME RTP FINANCE CENTER						\$158,475.00
b. STREET ADDRESS (or P.O. Box) US ENVIRONMENTAL PROTECTION AGENCY RTP-FINANCE CENTER D143-02 109 TW ALEXANDER DRIVE						
c. CITY DURHAM		d. STATE NC	e. ZIP CODE 27711			17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)	23. NAME (Typed) Camille W. Davis TITLE: CONTRACTING/ORDERING OFFICER
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ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO

2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER

CONTRACT NO.

ORDER NO.

02/12/2013

EP-C-11-038

0013

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>Admin Office: CPOD US ENVIRONMENTAL PROTECTION AGENCY 26 WEST MARTIN LUTHER KING DRIVE MAIL CODE NWD CINCINNATI OH 45268</p> <p>Accounting Info: 12-13-C-26CL000-301FK8XPW-2532-26A6A-1326CLE 003-001 BFY: 12 EFY: 13 Fund: C Budget Org: 26CL000 Program (PRC): 301FK8XPW Budget (BOC): 2532 Cost: 26A6A DCN - Line ID: 1326CLE003-001 Period of Performance: 02/13/2013 to 07/14/2014</p> <p>Development of a Sustainability Tool for Tribal Housing Decision-Making Award Type: Cost-plus-fixed-fee Total Estimated Cost: \$(b)(4) Fixed Fee: (b)(4) Completion Form Incrementally Funded Amount: \$119,500.00</p> <p>The obligated amount of award: \$119,500.00. The total for this award is</p>				158,475.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$158,475.00

PERFORMANCE WORK STATEMENT
STREAMS II
Task Order 0013, Battelle EP-C-11-038

TITLE: Development of a Sustainability Tool for Tribal Housing Decision-Making

Task Order Manager (TOM)	Alternate Task Order Manager (ATOM)
Name: Douglas Grosse	Name: Verle Hansen
Office: ORD/NRMRL/LRPCD 26 W. Martin Luther King Drive, MS489 Cincinnati, OH 45268	Office: ORD/NRMRL/LRPCD 26 W. Martin Luther King Drive, MS489 Cincinnati, OH 45268
Phone: (513) 569-7844	Phone: (513) 569-7326
Fax: (513) 569-7676	Fax: (513) 569-7676
Email: Grosse.Douglas@epa.gov	Email: Hansen.Verle@epa.gov

PERIOD OF PERFORMANCE: Date of Task Order Award through 18 months after Award

BACKGROUND

American Indian tribes in the Western Regions have insufficient and inadequate housing to meet demand. For example, part of the large Pine Ridge Indian Reservation is in the poorest county in the U.S. with unemployment between 80% - 85% and almost half of the population living below the federal poverty level. According to a recent Center for Disease Control (CDC) American Housing Survey, 7.5% of the American Indians/Alaskan natives housing units surveyed exhibit moderate or severe deficiencies in plumbing, heating, electricity, and upkeep while 31.9% of the units contained characteristics (in addition to those of inadequate housing) that negatively affect the health of the occupants - the highest of any ethnic group surveyed. Furthermore, anecdotal evidence suggests that extreme winter temperatures in northern plains and mountain tribes result in some families paying \$400 - \$600 a month to heat modular homes. Given these circumstances, American Indian tribes face difficult housing decisions that bear environmental, health, economic, and cultural implications. Quite often tribes have an immediate need for housing and forego environmental concerns on the location of housing. For example, many tribes are given discarded military housing and locate these second hand structures wherever they can, without initial planning or concern for implementing a consistent strategy for locating these homes. In addition, infrastructures, such as utilities, are not put in place beforehand. Residents living on reservations, such as Pine Ridge, Rocky Boys and others are living in abandoned cars or makeshift housing due to the lack of available standard housing creating environmental degradation and more cost to the community.

Despite these challenges, ingenuity and persistence is visible in many new examples of alternative tribal housing that are healthier, greener, more economically viable, and culturally relevant to American Indian people. Some examples include compressed earth block homes on the Crow Indian Reservation, straw bale homes on the Rosebud Indian Reservation, and structural insulated panel homes on other reservations, to mention a few. This project aligns with EPA's Sustainable and Healthy Communities Strategic (SHC) Research Action Plan 2012-2016, Theme 1, Data and Tools to Support Sustainable Community Decisions.

Several examples of work are currently underway in EPA Region 8 (R8) Indian country to design, build, and evaluate alternative tribal housing that is healthier, greener, more economically viable, and culturally relevant to American Indian people. Examples include:

- (1) **Crow Tribe:** Together with the Mortenson Center for Engineering for Developing Communities (University of Colorado –Boulder), Good Earth Lodges, and the Crow Tribal College, the Crow Tribe is seeking to transfer the necessary knowledge, skills and resources to provide for the tribe's long-term housing needs through culturally appropriate and economically viable compressed earth block homes.
- (2) **Oglala Sioux Tribe:** The Oglala Lakota College, Native American Sustainable Housing Initiative (University of Colorado – Boulder) and the Oglala Sioux Tribe are working together to design, build, and evaluate culturally and regionally appropriate housing. Efforts will include the construction of a straw bale, compressed earth block, structurally insulated panel, and conventionally designed home. Indoor air quality and energy efficiency measurements, among others, will be conducted.

Other similar efforts to further green and healthy tribal housing include:

- (1) **Tribal Green Building Code Workgroup:** EPA Region 9 (R9) is leading a national effort to increase tribes' capacities to develop and adopt tribal green building codes which may prove valuable to this effort. Region 9 is also involved in preliminary work to address tribal housing affordability issues related to their green building code efforts.
- (2) **National Tribal Healthy Homes Assessment, Training, and Technical Assistance Support Center:** Located at the Montana State University, this center has conducted numerous tribal healthy homes trainings across the country as well as hundreds of tribal healthy homes assessments in EPA Region 8.
- (3) **HUD Sustainable Construction in Indian Country:** HUD is leading a national effort to assess barriers and opportunities to support sustainable construction in Indian country. The project will result in three (3) products: 1) documentation of best practices; 2) technical assistance and documentation to geographically diverse tribes nationally; and 3) development of a policy white paper. A draft report titled Impediments to Sustainable Construction in Indian Country was released in early 2012⁴.
- (4) **Sustainability Planning Grant:** Currently, Oglala Sioux Reservation has a Sustainability Planning Grant with HUD to develop a regional plan for sustainable development to build economic competitiveness by connecting housing with good jobs, quality schools and transportation

TASK ORDER OBJECTIVE:

The objective of this task order is to develop a sustainability tool that will measure alternative housing decisions with regard to impacts on: (1) ecosystems; (2) Native American cultural values and social institutions; (3) local and regional economic systems; (4) the health of occupants; and (5) the ability of families to adequately utilize and maintain property. It is

expected that the sustainability tool will embrace the tenants of EPA's Sustainable and Healthy Communities Strategic Plan by:

- (1) Assessing traditional/existing and alternative tribal housing using the three pillars of sustainability – environmental, societal, and economic.
- (2) Assisting American Indian tribes in making housing decisions that promote healthy, energy efficient, economically viable, and culturally relevant homes.

GENERAL TASK APPROACH:

This task order consists of five (5) tasks. Prior to preparing the work, the contractor shall determine whether they would have any potential conflict of interest (COI) to perform the tasks. The contractor shall notify the TOM if they have a conflict of interest and the nature of such COI. Should a COI exist, the contractor shall take no further action on that task assignment unless authorized by the Contracting Officer (CO). A report detailing the issues of the COI shall be sent to the CO, with electronic copies to the Project Officer (PO) and TOM.

The overall approach is to begin tasks aimed at achieving both objectives with an emphasis on transitioning over the work period from Objective 1 tasks to Objective 2 tasks. Meaningful tribal involvement and participation should be incorporated into each task. The project should actively engage Tribal Councils, Tribal Environmental Departments, Tribal Housing entities, Tribal Historic Preservation Officers, community members, and construction contractors. For example, understanding how housing construction and retrofits are currently procured and what additional information, and in what format, may be useful in tribal sustainable development decision-making. The contractor must demonstrate experience and knowledge of working in Indian country. Geographical requirements will be specified and detailed in the respective phases of this task order.

The TOM will provide the contractor with a standard format to be used when reporting under task (Tasks 2 through 5) deliverables.

TASKS:

Task 1: Quality Assurance Project Plan

A Category III quality assurance project plan (QAPP) as defined by NRMRL QA requirements, shall be developed for all data acquisition activities that involve sample collection and analysis unless a different QA category is specified. Any task that requires measuring or sampling (environmental measurements) will need a QAPP unless an exception is denoted in a task. The contractor shall submit the QAPP for approval within 30 days from task order award. EPA will review and approve the QAPP within two (2) weeks.

Task 2: Review and Collection of Existing Data

This project will first rely upon the collection of existing data, information, and knowledge to complete sustainability assessments on both traditional/existing and alternative/newly developed

(approximately 3 – 4 types) tribal housing. Standardized decision analysis approaches (Parnell, 2007) may be used. Sources and relevant criteria identified thus far include:

Environmental:

- Indoor air quality assessment:
- CO, CO₂, radon, moisture/humidity, total volatile organic compounds, formaldehyde, presence and visual extent of mold
- Energy performance:
- Predictive energy modeling to estimate monthly energy bills or the actual energy bills
- Infrared camera examination, blower door testing, duct tightness, data logging of temperatures, HERS rating
- ENERGY STAR Portfolio Manager for greenhouse gas emission projections
- Materials management:
 - Locally manufactured or harvested/mined content
 - Recycled content
 - Rapidly renewable content
 - Reused/repurposed materials.
- Water usage:
 - Water bills/meters or other means of tracking usage, leak prevention, WaterSense fixtures.

Economic: Cost of materials; cost of construction; out-sourced costs; long-term anticipated maintenance and repair costs; utility bills (electricity, gas, water, etc...); infrastructure requirements; overall allocation and distribution of financial resources; development of a simplified list of available federal housing funds and what these funds can be used for

Societal: Knowledge of traditional and non-traditional building practices and maintenance; cultural and community benefits and impacts; other impacts on tribal culture and community development as identified in *Benefits of Tribal Building Codes*

This review may take up to four (4) months and the results of this literature search and review shall be presented to EPA through a brief summary electronically and the contractor shall participate in a conference call to obtain feedback within four (4) weeks after submittal.

Task 3: Conduct Housing Assessments and Collect New Information

Upon completion of Task 2, the contractor will conduct housing assessments and collect additional information to fill in the data, information, and knowledge that were not readily available in Task 2 above. Such housing assessment and new data acquisition may take up to seven (7) additional months and shall be summarized in a written report and presented to EPA. EPA will provide comments within four (4) weeks that the contractor will incorporate.

Task 4: Data and Information Management

Compile and organize data into as-needed formats (i.e. tabular, graphical, and statistical). Possible analyses may include a hierarchy of best practices ranked in order of cost effectiveness

(i.e., cost of green building components per ft²; effectiveness of each element; modeling of various building designs/elements, materials and wall assemblies; and cultural acceptability). This particular task may take up to two (2) additional months to complete the deliverable as defined below.

NOTE: The contractor shall provide the TOM with both hard copy and computerized/ electronic copy of all technical reviews conducted under this task. EPA may take up to 30 days to review all the data and information collected to date and provide comments to the contractor for consideration in planning Task 5, the development of the sustainability tool.

Task 5: Develop Sustainability Tool

Using the data, information, and knowledge collected in the previous subtasks along with interviews with tribal members, develop a sustainability tool to help tribal decision-makers arrive at and understand the most appropriate sustainable housing decisions to advance the economic, societal, and environmental interests of their tribe both in the short and long-term. Development should include usability assessments with tribal members to modify methodology/user interface to meet users' needs. The tool must be easy to use, readily available, and be adaptable to reflect each tribe's unique assets, challenges, and priorities. Additionally, identification of pertinent place-based data and information, i.e. tribal housing values and preferences, building material specifications, environmental health data etc., could be used in conjunction with community assessment tools such as Tribal Focused Exposure Risk Screening Tool (T-FERST) to frame the decision and enhance collaborative development of a multi-criteria decision tool supporting more sustainable tribal housing. The Draft deliverable may take up to six (6) months to develop and submit to EPA for review and comment. An additional 30 days may be required to finalize the final deliverable, the Housing Sustainability Tool.

APPENDICES

APPENDIX A: Sustainability Tool Example

APPENDIX B: Selected References

APPENDIX A: Sustainability Tool Example

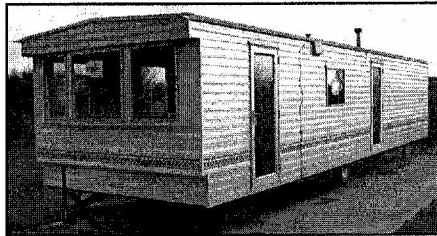
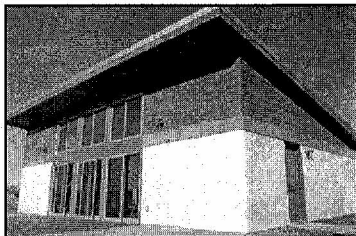
EXAMPLE of what the sustainability tool MAY provide:

Step 1 – Input unique characteristics, challenges, assets of tribe (i.e. high water table, severe overcrowding/lack of houses, high childhood asthma rate, high home energy costs, tribal housing knowledge & expertise, feasible housing options, willingness to learn new techniques, partnership capacity)

Step 2 – Input federal housing funds received and for what purposes

Step 3 – Select and rank tribal priorities (i.e. reduce overcrowding and homelessness, long-term economic viability, environmental health of occupants, creating a sense of community/culture, reduce energy costs, increase environmental protection)

Result - Based on input, the sustainability tool may have the following suggestions:



Others...?

earth
materials

Purchase X mobile homes.

i.e. perform energy
efficiency, weatherization,

The potential positive and negative impacts/outcomes of the suggestions will also be provided to help understand and weigh possible compromises.

Under this scenario, use of federal housing funds will house X number of occupants, will have X short term and long term economic impact, will improve upon X areas of environmental health for occupants, will reduce heating bills by X, and so on...

By contrast, under existing tribal procurement practices, federal housing funds will house X number of occupants, is expected to cost X in operation and maintenance, and will need to be replaced in X years.

APPENDIX B: Selected References

- U.S. Census Bureau, 2000. www.census.gov
- Inadequate and Unhealthy Housing, 2007 and 2009. U.S. Center for Disease Control, National Center for Environmental Health. **January 14, 2011 / 60(01); 21-27.**
<http://www.cdc.gov/mmwr/preview/mmwrhtml/su6001a4.htm>
- EPA Sustainable and Healthy Communities Strategic Research Action Plan, 2012-2016. <http://epa.gov/research/docs/shc-strap.pdf>
- Impediments to Sustainable Construction in Indian Country. Sustainable Construction in Indian Country Initiative. HUD, Office of Native American Programs, 2012.
http://www.huduser.org/portal/publications/pdf/na_Impediments_SCinIC_Draft_Report.pdf
- Parnell, G. S., Chapter 19, Value-Focused Thinking Using Multiple Objective Decision Analysis, Methods for Conducting Military Operational Analysis: Best Practices in Use Throughout the Department of Defense, Military Operations Research Society, Editors Andrew Loerch and Larry Rainey, 2007.
- Benefits of Tribal Building Codes, 2012.
<http://www.epa.gov/region9/greenbuilding/pdfs/tribal-building-codes-2012.pdf>

**Quality Assurance Surveillance Plan
STREAMS II
Task Order 0013, Battelle EP-C-11-038**

TITLE: Development of a Sustainability Tool for Tribal Housing Decision-Making

TASK ORDER MANAGER: Douglas Grosse

Performance Objective (Task)	Performance Standard (PS)	Surveillance Plan (SP)	Contractor Incentive (CI)	✓ or X
Task 1: Quality Assurance Project Plan	Contractor provides acceptable Draft QAPP within 30 days after task order award.	TOM will document whether quality of deliverable is at an acceptable level.	TOM will address compliance in PPE	X
Task 2: Review and Collection of Existing Data	Contractor provides review of approaches as defined and comments on use within 60 days.	TOM will document whether receipt of deliverable is timely. TOM will document whether quality of deliverable is at an acceptable level.	TOM will address compliance in PPE	X
Task 3: Conduct Housing Assessments and Collect New Information	Contractor provides full and complete documentation of reviews within 60 days after request	TOM will document whether receipt of deliverable is timely. TOM will document whether quality of deliverable is at an acceptable level.	TOM will address compliance in PPE	
Task 4: Data and Information Management	Contractor provides full and complete evaluation and documentation of reviews within 60 days after request.	TOM will document whether receipt of deliverable is timely. TOM will document whether quality of deliverable is at an acceptable level.	TOM will address compliance in PPE	X
Task 5: Develop Sustainability Tool	Contractor provides final deliverable (sustainability housing tool) within 90 days after request, including a 30-day EPA review.	TOM will document whether receipt of deliverable is timely. TOM will document whether quality of deliverable is at an acceptable level.	TOM will address compliance in PPE	X